ABSTRACT

Systems are provided for improving servo-demodulation robustness, especially when used with a disk having zone bit recorded servo wedges. The systems include a first servo demodulator adapted to search for a servo address mark (SAM) pattern, within a servo wedge, at a first nominal frequency useful for searching for the SAM pattern if the servo wedge is within a first zone. The systems also include a second servo demodulator adapted to search for the SAM pattern, within the same servo wedge, at a second nominal frequency useful for searching for the SAM pattern if the servo wedge is within the second zone. A microprocessor can then determine which of the first and second zones a head is reading, based at least in part on which of the first and second demodulators detects the SAM pattern.